

### REMARKS

Claims 1-8 remain pending and stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakaya et al. U.S. Patent 5,998,921 (“Nakaya”). This rejection is respectfully traversed.

Independent claim 1 is directed to a low-pressure discharge lamp comprising a tubular glass lamp vessel on an outer surface of which a conductor layer is formed as an electrode, wherein the conductor layer is formed by solder dipping and has a main component of any one of tin, an alloy of tin and indium, or an alloy of tin and bismuth. As described in the specification, when the conductor layer is formed by solder dipping and has a main component of tin, an alloy of tin and indium, or an alloy of tin and bismuth, a strong adhesive bond is created between the conductor layer and the glass surface, and the lamp has a stabilized discharge characteristic and a lengthened lifespan (specification p. 3, lines 10-21).

Independent claim 4 is directed to a low-pressure discharge lamp comprising a tubular glass lamp vessel on an outer surface of which a conductor layer is formed as an electrode, wherein the conductor layer is formed by ultrasonic solder dipping. As described in the specification, when the conductor layer is formed by ultrasonic solder dipping, an even layer with a uniform thickness is obtained and the resulting low-pressure discharge lamp is highly efficient (specification p. 4, lines 19-24).

Nakaya is cited as describing a lamp comprising a tubular glass lamp vessel (2) and an external electrode (8) on an outer surface of the vessel that may be formed of a transparent conductive film such as indium tin oxide (column 5, lines 42-45). Although the Office Action recognizes that Nakaya does not describe a conductor layer formed by solder dipping or by ultrasonic solder dipping, as claimed in claim 1 and 4, respectively, the Office Action asserts that the claimed references to solder dipping and ultrasonic solder dipping are “not deemed positive product limitation[s].” The Office Action indicates no patentable weight has been given to these claim limitations.

Although the Office Action cites to M.P.E.P. § 2113 in support of its assertion that “solder dipping” and “ultrasonic solder dipping” should not be afforded patentable weight, this section of the M.P.E.P. actually commands just the opposite. The most pertinent portion of M.P.E.P. § 2113 is reproduced below:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding “interbonded by interfusion” to limit structure of the claimed composite and noting that terms such as “welded,” “intermixed,” “ground in place,” “press fitted,” and “etched” are capable of construction as structural limitations.)

(emphasis added). As explained above, when the conductor layer is formed by solder dipping and has a main component of tin, an alloy of tin and indium, or an alloy of tin and bismuth, a strong adhesive bond is created between the conductor layer and the glass surface, and the lamp has a stabilized discharge characteristic and a lengthened lifespan (specification p. 3, lines 10-21). When the conductor layer is formed by ultrasonic solder dipping, an even layer with a uniform thickness is obtained and the resulting low-pressure discharge lamp is highly efficient (specification p. 4, lines 19-24).

Accordingly, the present record amply demonstrates that the claim limitations of solder dipping (claim 1) and ultrasonic solder dipping (claim 4) are “manufacturing process steps [that] would be expected to impart distinctive structural characteristics to the final product.” *Garnero*, 412 F.2d at 279. In view of these distinctive structural differences over Nakaya, the low-pressure discharge lamp of independent claims 1 and 4 is not described or suggested by Nakaya.

Dependent claims 2, 3, and 5-8 are allowable over Nakaya for at least the same reasons applicable to independent claims 1 and 4.

In view of the foregoing, favorable reconsideration and allowance of the subject application are respectfully requested.

Respectfully submitted,

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